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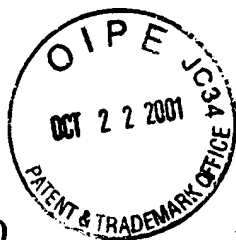
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1193-02122
US2



The United States of America



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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

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United States Patent [19]

Ikawa et al.

[11] **Patent Number:** **5,834,922**
 [45] **Date of Patent:** ***Nov. 10, 1998**

[54] **SECONDARY BATTERY POWER STORAGE SYSTEM**[75] **Inventors:** **Kyoko Ikawa; Tatsuo Horiba**, both of Hitachi, Japan[73] **Assignee:** **Hitachi, Ltd.**, Tokyo, Japan[*] **Notice:** This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).[21] **Appl. No.:** **606,226**[22] **Filed:** **Feb. 23, 1996****Related U.S. Application Data**

[63] Continuation of Ser. No. 363,372, Dec. 23, 1994, abandoned.

[30] **Foreign Application Priority Data**

Dec. 27, 1993 [JP] Japan 5-331000

[51] **Int. Cl.⁶** **H01M 10/44; H01M 10/46**[52] **U.S. Cl.** **320/136**[58] **Field of Search** 429/61; 320/5, 320/6, 10, 9, 13, 14, 39, 15, 30, 121, 116, 125, 132, 134, 136, 149, 160[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57]

ABSTRACT

The present invention provides a distributed secondary battery type power storage system capable of maintaining the soundness of the secondary battery and of efficient electric power charging and discharging operations. The secondary battery power storage system comprises a secondary battery connected to a load, a charge/discharge unit connectable to a power system and connected to the secondary battery, and a plurality of loads connected to the charge/discharge unit. A power receiving object is selected about the operating condition of the plurality of loads, and the surplus electric power remaining in the secondary battery after feeding electric power from the secondary battery to the load is fed to the selected power receiving object through the charge/discharge unit. The secondary battery power storage system is capable of maintaining the soundness of the secondary battery and of efficient charging and discharging operation.

31 Claims, 6 Drawing Sheets